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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,194	11/27/2000	Keiji Negi	10830-048001	5695
26211	7590	03/29/2004	EXAMINER	
FISH & RICHARDSON P.C. 45 ROCKEFELLER PLAZA, SUITE 2800 NEW YORK, NY 10111			MOORE JR, MICHAEL J	
			ART UNIT	PAPER NUMBER
			2666	
DATE MAILED: 03/29/2004				

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/723,194	NEGI, KEIJI	
Examiner	Art Unit		
Michael J. Moore, Jr.	2666		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 27 November 2000.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-10 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other:

DETAILED ACTION

Drawings

1. Figures 7, 8, 9, 10A, 10B, 11, and 12 should be designated by a legend such as -
-Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because of the following informalities: In Figure 9, the second entry in the column "Q1" should be "G" instead of "C". Also, the third entry in the column "Q0" should be "G" instead of "C". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: On page 9, lines 5-14, there is a lack of correspondence between the brief descriptions of Figures 1-4 and Figures 1-4 of the formal drawings. On page 13, lines 24 and 25, there is some confusion regarding the language used on these lines. Appropriate correction is required.

Claim Objections

4. Claim 2 objected to because of the following informalities: There is a missing "a" between the words "using" and "(n/l)-th". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 recites the limitation "the position information" in line 8. There is insufficient antecedent basis for this limitation in the claim. Claim 1 recites the limitation "the frame position information" in lines 12 and 16. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 2 recites the limitation "the first bit" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claim 2 recites the limitation "the frame position information" in lines 6 and 10. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 3 recites the limitation "said mutually different first sort means" in line 7. There is insufficient antecedent basis for this limitation in the claim. Claim 3 recites the limitation "the frame position information" in lines 9 and 13. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 4 recites the limitation "the frame position information" in line 3. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 5 recites the limitation "said sort means" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 5 recites the limitation "the same clock" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 5 recites the limitation "the frame position information" in line 3. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 6 recites the limitation "the frame position information" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 6 recites the limitation "the number of bits" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 6 recites the limitation "the number m of shift means" in line 3. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 7 recites the limitation "said shift means" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 7 recites the limitation "the frame position information" in line 3. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 8 recites the limitation "said sort means" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 8 recites the limitation "the same clock" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 8 recites the limitation "the frame position information" in line 3. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 9 recites the limitation "the frame position information" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 9 recites the limitation "the number of bits" in line 3. There is insufficient antecedent basis for this limitation in

the claim. Claim 9 recites the limitation "the number m of shift means" in line 3. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 10 recites the limitation "the frame position information" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 10 recites the limitation "the number of bits" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Allowable Subject Matter

17. Claims 1-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

18. Claims 1-10 are allowable over the prior art of record.

19. The following is an examiner's statement of reasons for allowance over the prior art of record:

Regarding claim 1, the prior art of record teaches a "pattern synchronous circuit comprising: branch means for branching parallel signals of n bits inputted from a parallel signal input terminal into two portions, frame detection means for using one portion of the parallel signals branched by said branch means as input and detecting a frame identification pattern in the parallel signals to output the position information, and first sort means for using the other portion of the parallel signals branched by said branch means as input and sorting the parallel signals according to a low order bit of the frame position information outputted by said frame detection means." See Figure 3 as well as column 14, lines 13-34 of Nakamura et al. (U.S. 6,385,213). The prior art made of record fails to teach a "second sort means for further using outputs of said first sort

means as input and again sorting the parallel signals according to all the bits of the frame position information outputted by said frame detection means."

Regarding claim 2, the prior art of record fails to teach the pattern synchronous circuit of claim 1 where the "said first sort means comprises: one shift means for using a (n/l) -th bit from the first bit of the parallel signals as input and performing shift operations according to a low order bit of the frame position information outputted by said frame detection means, and $(l-1)$ sort means for respectively using (n/l) bits in the continuous parallel signals as input and performing sort operations according to a low order bit of the frame position information outputted by said frame detection means."

Regarding claim 3, the prior art of record fails to teach the pattern synchronous circuit of claim 1 where the "said second sort means comprises: delay means for using data obtained by sampling said first sort means every m bits as input and delaying signals, $(m-1)$ sort means for respectively using data obtained by sampling said mutually different first sort means every m bits as input and performing sort operations according to the low order bit of the frame position information outputted by said frame detection means, and m shift means for respectively using outputs of said delay means and said sort means as input and performing shift operations according to a high order bit of frame position information outputted by said frame detection means.

Regarding claim 4, the prior art of record fails to teach the pattern synchronous circuit of claim 2 where the "said shift means shifts bits without sorting a list of the parallel signals according to the frame position information."

Regarding claim **5**, the prior art of record fails to teach the pattern synchronous circuit of claim **2** where the “said sort means sorts a list of bits in the same clock of the parallel signals according to the frame position information.”

Regarding claim **6**, the prior art of record fails to teach the pattern synchronous circuit of claim **1** where “the low order bit of the frame position information outputted by said frame detection means has the number of bits sufficient to indicate values of the number m of shift means constructing said second sort means.”

Regarding claim **7**, the prior art of record fails to teach the pattern synchronous circuit of claim **3** where the “said shift means shifts bits without sorting a list of the parallel signals according to the frame position information.”

Regarding claim **8**, the prior art of record fails to teach the pattern synchronous circuit of claim **3** where the “said sort means sorts a list of bits in the same clock of the parallel signals according to the frame position information.”

Regarding claim **9**, the prior art of record fails to teach the pattern synchronous circuit of claim **2** where “the low order bit of the frame position information outputted by said frame detection means has the number of bits sufficient to indicate values of the number m of shift means constructing said second sort means.”

Regarding claim **10**, the prior art of record fails to teach the pattern synchronous circuit of claim **3** where “the low order bit of the frame position information outputted by said frame detection means has the number of bits sufficient to indicate values of the number m of shift means constructing said second sort means.”

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakamura et al. (U.S. 6,385,213), Kay (U.S. 6,134,233), Suh et al. (U.S. 5,710,774), Kinoshita et al. (U.S. 5,140,618), Miki et al. (US 2003/0189954), Soda (U.S. 6,359,908), and Dhara (U.S. 5,974,104) are all references that contain material pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (703) 305-8703. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

mjm MM



MOORE
EXAMINER